

Advanced Java Lab

Week-2

Roll Number: 238W1A12C4

1. Insert, Update, Delete Using PreparedStatement

Code:

```
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change
this license
 */

```

```
package com.mycompany.mavenproject2;
import java.sql.*;

public class Mavenproject2 {
    public static void main(String[] args) {

        String url = "jdbc:mysql://localhost:3306/mydb";
        String user = "root";
        String password = "";

        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection con = DriverManager.getConnection(url, user, password);
            System.out.println("Connected!");

            // INSERT -----
            String insertSQL = "INSERT INTO Person (PersonID, FirstName, City) VALUES
            (?, ?, ?)";
            PreparedStatement insertStmt = con.prepareStatement(insertSQL);
```

```

        insertStmt.setInt(1, 101);
        insertStmt.setString(2, "Rahul");
        insertStmt.setString(3, "Hyderabad");
        int insertCount = insertStmt.executeUpdate();
        System.out.println(insertCount + " row inserted.");

        // UPDATE -----
        String updateSQL = "UPDATE Person SET City=? WHERE PersonID=?";
        PreparedStatement updateStmt = con.prepareStatement(updateSQL);
        updateStmt.setString(1, "Bangalore");
        updateStmt.setInt(2, 101);
        int updateCount = updateStmt.executeUpdate();
        System.out.println(updateCount + " row updated.");

        // DELETE -----
        String deleteSQL = "DELETE FROM Person WHERE PersonID=?";
        PreparedStatement deleteStmt = con.prepareStatement(deleteSQL);
        deleteStmt.setInt(1, 101);
        int deleteCount = deleteStmt.executeUpdate();
        System.out.println(deleteCount + " row deleted.");

        con.close();

    } catch (Exception e) {
        System.out.println("Error : " + e.getMessage());
    }
}

```

Output:

```
--- exec:3.1.0:exec (default-cli) @ mavenproject2 ---
Connected!
1 row inserted.
1 row updated.
1 row deleted.

-----
BUILD SUCCESS
-----
Total time: 3.593 s
Finished at: 2025-11-22T17:39:40+05:30
```

2. Explore ResultSet navigation methods and retrieve data in tabular format.

Code:

```
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import java.sql.*;

public class Mavenproject2 {

    public static void main(String[] args) {

        String url = "jdbc:mysql://localhost:3306/mydb";
        String user = "root";
        String password = "";

        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection con = DriverManager.getConnection(url, user, password);

            Statement stmt = con.createStatement()
```

```
        ResultSet.TYPE_SCROLL_INSENSITIVE,  
        ResultSet.CONCUR_READ_ONLY  
    );  
  
    ResultSet rs = stmt.executeQuery("SELECT PersonID, FirstName, City FROM  
Person");  
  
    // Print table header  
    System.out.println("-----");  
    System.out.printf("%-10s %-15s %-15s\n", "ID", "Name", "City");  
    System.out.println("-----");  
  
    // Move to first record  
    if (rs.first()) {  
        do {  
            System.out.printf("%-10d %-15s %-15s\n",  
                rs.getInt("PersonID"),  
                rs.getString("FirstName"),  
                rs.getString("City")  
            );  
        } while (rs.next());  
    }  
  
    System.out.println("-----");  
  
    // Move to last record  
    if (rs.last()) {  
        System.out.println("Last Record → " + rs.getString("FirstName"));  
    }
```

```

// Move to first record

if (rs.first()) {
    System.out.println("First Record → " + rs.getString("FirstName"));

}

// Move to absolute row number 2

if (rs.absolute(2)) {
    System.out.println("2nd Row → " + rs.getString("FirstName"));

}

con.close();

} catch (Exception e) {
    System.out.println("Error : " + e);
}

}

```

Output:

```

[exec:3.1.0:exec (default-cli) @ mavenproject2 ---]
-----
ID      Name       City
-----
1       John       New York
2       Rahul      Hyderabad
3       Meera     Mumbai
4       David      London
-----
Last Record ? David
First Record ? John
2nd Row ? Rahul
-----
BUILD SUCCESS
-----
Total time: 4.238 s
Finished at: 2025-11-22T17:44:05+05:30
-----
```